

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number  
**WO 2005/069998 A3**

(51) International Patent Classification<sup>7</sup>: C07C 39/215, 69/017.

(21) International Application Number:  
PCT/US2005/002229

(22) International Filing Date: 19 January 2005 (19.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/537,622 20 January 2004 (20.01.2004) US  
60/616,537 6 October 2004 (06.10.2004) US

(71) Applicant (for all designated States except US):  
BRIGHAM YOUNG UNIVERSITY TECHNOLOGY TRANSFER OFFICE [US/US]; A285 ASB, P.O.Box 21231, Provo, UT 84602-1231 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ANDRUS, Merritt, B. [US/US]; 186 North 980 East, Lindon, UT 84042 (US). LIU, Jing [CN/US]; 45 Wymount Terrace, Provo, UT 84604 (US).

(74) Agent: WIGHT, Christopher, L.; Holland & Hart LLP, Suite 3200, 555 - 17th Street, P.O: Box 8749, Denver, CO 80201 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AI, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CI, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

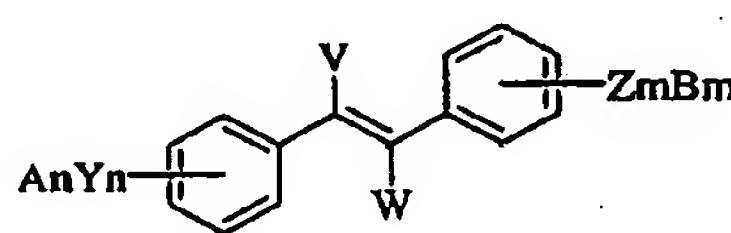
Published:

— with international search report

(88) Date of publication of the international search report:  
5 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NOVEL SIRTUIN ACTIVATING COMPOUNDS AND METHODS FOR MAKING THE SAME



(I)

(57) Abstract: The present invention includes methods for preparing resveratrol, resveratrol esters and substituted and unsubstituted stilbenes of the formula given below; where each Y is -O or halogen, each Z is -O or halogen, each n and each m is

independently the value of 0, 1, 2, 3, 4 or 5, each A and each B is independently selected from P<sub>n</sub>, R or absent, each V and each W is independently selected from P<sub>n</sub>, straight or branched alkyl of from (2) to (6) carbon atoms and cycloalkyl of from (3) to (8) carbon atoms, alkoxy, phenyl, benzyl or halogen, R is independently selected from the group comprising alkyl with at least one carbon atom, aryl and aralkyl, P<sub>n</sub> is an alcohol protecting group and diastereoisomers of the foregoing. The compounds are made from a multi-step process including a N-heterocyclic carbene-type ligand coupling in the presence of a base with benzoyl halide and styrene coupling partners. These compounds show increased stability for use in the food, cosmetic and pharmaceutical industries.

A3

WO 2005/069998